

WHAT IS CLAIMED IS:

1 1. An electronic reading device, comprising:
2 a reading sensor for detecting at least a
3 portion of information printed on a surface and an
4 associated portion of an address pattern included on the
5 surface, wherein a position of the reading sensor relative
6 to the address pattern can be determined from the detected
7 portion of the address pattern, said reading sensor
8 operating to forward the detected portion of the printed
9 information and the detected portion of the address
10 pattern associated therewith.

1 2. The electronic reading device of claim 1,
2 wherein the detected portion of the printed information is
3 printed on a surface having a preprinted address pattern.

1 3. The electronic reading device of claim 1,
2 wherein the address pattern is superimposed on a surface
3 having preexisting printed information.

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1 4. The electronic reading device of claim 1,
2 wherein the address pattern comprises a pattern of dots.

1 5. The electronic reading device of claim 1,
2 wherein the reading sensor comprises a first sensor for
3 detecting portions of the printed information and a second
4 sensor for detecting portions of the address pattern.

1 6. The electronic reading device of claim 1,
2 wherein the printed information reflects light in a first
3 part of the light spectrum and the address pattern
4 reflects light in a second part of the light spectrum, the
5 first part of the light spectrum at least partially non-
6 overlapping with the second part of the light spectrum.

1 7. The electronic reading device of claim 6,
2 wherein the first part of the light spectrum and the
3 second part of the light spectrum each comprise at least a
4 portion of at least one of the visible light spectrum, the
5 ultraviolet spectrum, and the infrared spectrum.

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1 8. The electronic reading device of claim 6,
2 wherein the reading sensor comprises:
3 a first sensor for detecting light in the first
4 part of the light spectrum; and
5 a second sensor for detecting light in the
6 second part of the light spectrum.

1 9. The electronic reading device of claim 6,
2 further comprising a light emitter operating to emit light
3 in at least one of the first part of the light spectrum
4 and the second part of the light spectrum.

1 10. The electronic reading device of claim 9,
2 wherein the light emitter emits a wide spectrum light and
3 the reading sensor comprises a plurality of sensors, at
4 least one of the plurality of sensors including a filter
5 for filtering out one of the first part of the light
6 spectrum and the second part of the light spectrum.

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1 11. The electronic reading device of claim 9,
2 wherein the light emitter includes:
3 a first light emitting diode operating to emit
4 an infrared light; and
5 a second light emitting diode operating to emit
6 a non-infrared light.

1 12. The electronic reading device of claim 11,
2 wherein the first light emitting diode and the second
3 light emitting diode are alternately activated.

1 13. The electronic reading device of claim 1,
2 wherein the electronic reading device comprises a hand
3 scanner.

1 14. The electronic reading device of claim 1,
2 wherein the reading sensor forwards the detected printed
3 information and the detected portion of the address
4 pattern associated therewith to a processor, said
5 processor operating to generate an electronic copy of the
6 printed information by determining positions of the
7 detected printed information using the associated portions
8 of the address pattern.

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1 15. A system for reading printed information,
2 comprising:
3 a formatted surface including an address pattern
4 and printed information, wherein a position relative to
5 the address pattern can be determined from an examination
6 of only a portion of the address pattern; and
7 an electronic reading device including a reading
8 sensor for substantially simultaneously detecting at least
9 a portion of the printed information and a corresponding
10 portion of the address pattern.

1 16. The system of claim 15, wherein the formatted
2 surface comprises a sheet of paper.

1 17. The system of claim 15, wherein the formatted
2 surface comprises a display screen, the printed
3 information and the address pattern displayed on the
4 display screen.

1 18. The system of claim 15, wherein the formatted
2 surface comprises a display screen, the printed
3 information displayed on the display screen and the
4 address pattern preprinted on the display screen.

1 19. The system of claim 15, further comprising a
2 processor for generating an electronic copy of the printed
3 information by determining a location of each portion of
4 the detected printed information based on the
5 corresponding portion of the address pattern.

1 20. The system of claim 19, wherein the processor
2 can generate a substantially exact electronic copy of the
3 printed information regardless of the number of times and
4 the direction in which the reading sensor is moved across
5 the formatted surface.

1 21. The system of claim 19, wherein, when only parts
2 of the printed information are detected, the processor can
3 determine a substantially exact distance between the
4 detected parts of the printed information.

5 22. The system of claim 19, further comprising a
6 memory for storing an electronic copy of the address
7 pattern for use in generating the electronic copy of the
8 printed information.

1 23. The system of claim 22, wherein the processor
2 generates the electronic copy of the printed information
3 by mapping detected portions of the printed information
4 onto the stored copy of the address pattern.

1 24. The system of claim 19, wherein the electronic
2 reading device further comprises a light emitter for
3 emitting a broad spectrum light and the reading sensor
4 comprises a plurality of sensors, wherein at least one of
5 the sensors includes a filter for filtering out a portion
6 of the light spectrum, each sensor that includes a filter
7 detecting one of the printed information and the address
8 pattern and each sensor that does not include a filter
9 detecting the other of the printed information and the
10 address pattern.

1 25. The system of claim 19, wherein the electronic
2 reading device further comprises a first light emitter
3 emitting light in a first part of the light spectrum for
4 use in detecting portions of the address pattern.

1 26. The system of claim 25, wherein the electronic
2 device further includes a second light emitter emitting
3 light in a second part of the light spectrum for use in
4 detecting portions of the printed information, wherein the
5 second part of the light spectrum is distinct from the
6 first part of the light spectrum.

1 27. The system of claim 26, wherein the first light
2 emitter and the second light emitter are alternatively
3 activated.

1 28. The system of claim 15, further comprising a
2 processor for generating an output based on the detected
3 printed information and the detected portions of the
4 address pattern, wherein the output is selected from the
5 group consisting of sound, text, and an image.

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1 29. A method for scanning information, comprising
2 the steps of:
3 detecting at least a portion of an image on a
4 surface;
5 detecting a portion of an address pattern
6 depicted on the surface, the detection of the portion of
7 the address pattern performed substantially concurrently
8 with the detection of the portion of the image, said
9 detected portion of the address pattern corresponding to
10 the detected portion of the image; and
11 identifying a position of the detected portion
12 of the image using the corresponding detected portion of
13 the address pattern.

1 30. The method of claim 29, wherein the surface
2 comprises a display screen, further comprising the step of
3 generating the image on the display screen.

1 31. The method of claim 30, further comprising the
2 step of generating the address pattern on the display
3 screen.

1 32. The method of claim 29, wherein the surface
2 comprises a formatted paper.

1 33. The method of claim 29, further comprising the
2 step of scanning a reading sensor across the surface, said
3 steps of detecting the at least a portion of the image and
4 detecting the portion of the address pattern performed
5 during said scanning.

1 34. The method of claim 29, further comprising the
2 step of generating an electronic copy of the image by
3 mapping the detected portions of the image to specific
4 locations based on the corresponding detected portions of
5 the address pattern.

1 35. The method of claim 29, wherein the image
2 reflects light in a first part of the light spectrum and
3 the address pattern reflects light in a second part of the
4 light spectrum.

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1 36. The method of claim 35, wherein the detection of
2 portions of the image comprises detecting light in the
3 first part of the light spectrum and the detection of
4 portions of the address pattern comprises detecting light
5 in the second part of the light spectrum.

1 37. The method of claim 36, further comprising the
2 step of filtering at least one of the first part of the
3 light spectrum and the second part of the light spectrum.

1 38. The method of claim 37, further comprising the
2 step of illuminating the surface with a wide spectrum
3 light.

1 39. The method of claim 36, wherein the second part
2 of the light spectrum comprises infrared light.

1 40. The method of claim 39, further comprising the
2 step of illuminating the surface with an infrared light
3 during the step of detecting the portion of the address
4 pattern.

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1 41. The method of claim 40, further comprising
2 alternating between the step of detecting the at least a
3 portion of the image and the step of detecting the
4 corresponding portion of the address pattern.

1 42. The method of claim 41, further comprising the
2 step of illuminating the surface with light in the first
3 part of the light spectrum during the step of detecting
4 the at least a portion of the image.

1 43. The method of claim 29, further comprising the
2 step of generating output using the identified position,
3 wherein the output is selected from the group consisting
4 of sound, text, and an image.

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